

Emergency planning and response in general practice

Fact sheet and checklist: Measles



Measles was officially eliminated from Australia in 2014. However, a global outbreak has resulted in increased cases locally.

Considerations for GPs and practice staff

- Measles is a notifiable disease in all states and territories in Australia.
- Those born after 1966 and before 1994 are at higher risk of catching measles as they are most likely to have only had one dose of measles vaccine. Those born before 1966 are assumed to have acquired immunity through natural infection.¹
- The recommended two doses of measles, mumps and rubella (MMR) vaccine (M-M-R II and Priorix, available in Australia) provide protection against measles to over 99% of those who receive it.²
- Initial symptoms include fever, malaise, dry cough, runny nose and sore red eyes, followed by whole-of-body red blotchy rash. The rash is typically not itchy.³
- The incubation period is typically 10–14 days. A person is typically infectious from the beginning of the prodromal period (typically two to four days before rash onset) and for up to four days after the rash appears.²
- Post-exposure vaccination with the first of a two-dose course of the MMR vaccine or administration of immunoglobulin, as indicated, can mitigate risk for non-immune people if administered within three days.²
- Children can receive MMR vaccine from six months of age in certain circumstances, including post-exposure prophylaxis for measles. If vaccinated <11 months of age, it is recommended the first dose be repeated.²
- The combined measles, mumps, rubella and varicella (MMRV) vaccine is only registered for use in children aged 12 months to 12 years and should not be used as an alternative to the MMR vaccine in adults.²

Measles facts

- Measles is one of the world's most contagious viral diseases: nine out of 10 people who are unimmunised and exposed to the virus will be infected.³
- Around 10% of measles cases involve complications. These range from fever and rash, to pneumonia (6:100), otitis media (9:100) and acute encephalitis (1:1000). Sub-acute sclerosing panencephalitis is a rare late complication of measles (1:100,000) with an average onset of seven years post-infection and which is nearly always fatal.^{2,4}
- Immunisation rates of 95% are required for herd immunity to prevent outbreaks in a community.⁵ Current Australian coverage is estimated at 93.5% for children aged two years.⁶
- Extensive vaccination campaigns by the World Health Organization have decreased global deaths from measles by 84%, from more than 550,000 in 2000 to less than 90,000 in 2016.²



Case study: Northern Beaches Medical Centre

One Friday afternoon, a young man walked into our consulting room. He had recently returned from a holiday in New Zealand and had presented a few days earlier with flu-like symptoms. The flu swab had come back negative and this time he was complaining of a rash and conjunctivitis. Being aware there had been a large measles outbreak in New Zealand, we knew that we had to take action quickly.

We isolated the man and contacted NSW Health to notify a suspected case of measles. We closed the practice and ensured all people who had been in the waiting room, and our staff, were managed for exposure. This included checking immunisation status and offering on-the-spot immunisations to anyone not fully vaccinated. We also administered immunoglobulin to one person who could not have the live vaccine.

The whole practice underwent a clean, including the waiting room, consultation room and bathroom. Contact tracing was carried out by NSW Health for those who may have been in contact with the patient during his previous visit to the practice. Contacts were identified by extracting time stamp information from our practice management system. Fifty per cent of those contacted came back to the practice within 24 hours, where they were managed by the one allocated GP.

The man's condition deteriorated, resulting in pneumonia. After a brief hospitalisation, we're glad to say he made a full recovery from measles.

This case was a wake-up call for the whole practice. In these cases you need to be proactive and work as a team to keep patients and staff safe. This case has also focused our attention on patients' travel histories.

Dr Jonathan Adams and Dr Penny Burns

Measles preparation, response and recovery checklist^{7,8}

Preparation	
<input type="checkbox"/>	Ensure your practice has procedures and plans in place to manage patients presenting with infectious diseases and that all staff are trained and aware of their roles
<input type="checkbox"/>	Ensure staff are current for MMR vaccination (for those born during or after 1966, this means two documented doses of MMR vaccine or documented serology)
<input type="checkbox"/>	Maintain a staff immunisation register
<input type="checkbox"/>	Provide catch-up MMR vaccination for patients born between 1966 and 1994, where there is no documentation of two doses of MMR vaccine or serology
<input type="checkbox"/>	Monitor emergence of outbreaks via the Australian Government Department of Health or your local centre for disease control (refer to end table)
<input type="checkbox"/>	Include up-to-date MMR vaccination in travel advice
<input type="checkbox"/>	Identify/know your higher risk and vulnerable patient groups
<input type="checkbox"/>	In outbreaks, consider signage at the practice entrance notifying symptomatic patients to not enter the practice and to notify staff
<input type="checkbox"/>	Update all staff on the signs and symptoms of measles to ensure early triage, isolation and assessment
<input type="checkbox"/>	Maintain supplies of personal protective equipment (PPE) and ensure all staff know how to 'don and doff'
<input type="checkbox"/>	Ensure appropriate stock of vaccines – your state or territory public health department can organise immunoglobulin and extra vaccines as needed
Response	
<input type="checkbox"/>	Identify and isolate the patient – act on clinical diagnosis until lab confirmation
<input type="checkbox"/>	If needed, temporarily close the practice for a few hours to avoid additional exposure
<input type="checkbox"/>	Notify your state or territory public health department, which will provide advice and support
<input type="checkbox"/>	Use your practice patient management system to create a contact list for the state or territory public health department of patients present in the waiting room up to 30 minutes after the infectious patient
<input type="checkbox"/>	Check the immunisation status of those who have potentially been exposed
<input type="checkbox"/>	Offer post-exposure prophylaxis within the three-day window to those who have potentially been exposed (MMR vaccination or immunoglobulin as appropriate) or check immunity with IgG serology
<input type="checkbox"/>	Inform contacts to remain alert for signs and symptoms of measles for 18 days post-exposure and advise those who develop symptoms to contact the practice by phone before attending to avoid transmission to others
<input type="checkbox"/>	Communicate with patients regarding temporary closure and provide an alternate option or reschedule appointments
<input type="checkbox"/>	Allocate a team of resources (staff and information resources) to manage the exposed patient group, who may present after contact by the health department
<input type="checkbox"/>	Leave any rooms visited by the patient vacant for at least two hours. If access is required, a P2 (N95) respirator mask must be worn
<input type="checkbox"/>	Clean any surfaces the patient may have touched, coughed or sneezed on (additional cleaning products such as bleach are not required)
<input type="checkbox"/>	Dispose of any items potentially contaminated with respiratory secretions, such as tissues or tongue depressors, into clinical waste
<input type="checkbox"/>	Be alert for presentation of infected contacts for 18 days post-exposure
Recovery	
<input type="checkbox"/>	Ensure wellbeing of staff involved
<input type="checkbox"/>	Change patient information notices to general measles awareness posters
<input type="checkbox"/>	Communicate return to business as usual with patients
<input type="checkbox"/>	Review response and update the response plan as required
<input type="checkbox"/>	Assess supplies of PPE and other equipment to ensure readiness for future events

Resources

- The RACGP, *Infection prevention and control standards* (5th edition), www.racgp.org.au/running-a-practice/practice-standards/standards-for-other-health-care-settings/infection-prevention-and-control
- Australian Technical Advisory Group on Immunisation, *Australian Immunisation Handbook*, <https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/measles>
- National Centre for Immunisation Research and Surveillance, www.ncirs.org.au

State and territory health department centres for disease control

ACT Health	02 5124 9213
NSW Health	1300 066 055
Northern Territory Department of Health	08 8922 8044 1800 008 002
Queensland Health	1300 017190
SA Health	1300 232 272
Tasmanian Department of Health	1800 671 738
Victorian Department of Health	1300 651 160
Western Australian Department of Health	08 9222 0255

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6. National Centre for Immunisation Research and Surveillance. Coverage data and reports. Westmead: NCIRS, 2019. Available at www.ncirs.org.au/health-professionals/coverage-data-and-reports [Accessed 7 November 2019]
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